# DEPARTMENT OF ENVIRONMENTAL CONSERVATION AIR QUALITY CONSTRUCTION PERMIT

Permit No. 0031-AC059	Issue Date: Final - February 1, 2001
Application No. X107	
The Department of Environmental Conservation, under the 18 AAC 50, issues a construction permit to the Permittee, <b>U</b> authorizes the Central Heating and Power Plant (CHPP) En Projects, the Bassett Army Community Hospital (BACH) Ractivities associated with the Installation Restoration Plans <b>Wainwright</b> facility.	US Army Alaska. The permit missions Reduction and Upgrade Replacement Project, and the cleanup
This permit satisfies the obligation of the owner and operat set out in AS 46.14.130(a).	or to obtain a construction permit as
As required by AS 46.14.120(c), the Permittee shall comply construction permit.	y with the terms and conditions of this
John F. Kuterbach, Manager Air Permits Program	Date

 $G: \land WQ \land Awq\text{-}Permits \land IRFACS \land US \ Army - Ft. \ Wainwright \land construct \land X107 \land final \land Final \ Permit.doc$ 

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# **List of Abbreviations Used in this Permit**

AACAlaska Administrative Code
ADECAlaska Department of Environmental Conservation
ASAlaska Statutes
ASTMAmerican Society of Testing and Materials
CFRCode of Federal Regulations
COMSContinuous Opacity Monitoring System
dscfDry standard cubic feet
EPAUS Environmental Protection Agency
gr/dscfgrain per dry standard cubic feet (1 pound = 7000 grains)
GPHgallons per hour
HAPSHazardous Air Pollutants [hazardous air contaminants as defined in AS 46.14.990(14)]
IDSource Identification Number
MACTMaximum Achievable Control Technology
Mlbthousand pounds
NESHAPsFederal National Emission Standards for Hazardous Air Pollutants [as defined in 40 CFR 61]
NSPSFederal New Source Performance Standards [as defined in 40 CFR 60]
PPMParts per million
PSPerformance specification
PSDPrevention of Significant Deterioration
RMReference Method
SICStandard Industrial Classification
SO <sub>2</sub> Sulfur dioxide
TPHTons per hour
TPYTons per year
VOCvolatile organic compound [as defined in 18 AAC 50.990(103)]
Wt%weight percent

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### Section 1. Identification

### Names and Addresses

Permittee: US Army Alaska

730 Quartermaster Drive

Fort Richardson, Alaska 99505-6500

Facility: Fort Wainwright

Location: 64° 50′ N; 147° 35′ W

Physical Address: 3 miles southeast of Fairbanks, Alaska

Owner: US Army Alaska

Directorate of Public Works, APVR-RPW-EV

730 Quartermaster Drive

Fort Richardson, Alaska 99505-6500

Operator: US Army Alaska

Directorate of Public Works, APVR-RPW-EV

730 Quartermaster Drive

Fort Richardson, Alaska 99505-6500

Permittee's Responsible Official: Colonel Fredrick J. Lehman, Garrison Commander

Designated Agent: US Army Alaska

Directorate of Public Works, APVR-RPW-EV

730 Quartermaster Drive

Fort Richardson, Alaska 99505-6500

Facility and Building Contact: US Army Alaska

Directorate of Public Works, APVR-RPW-EV

730 Quartermaster Drive

Fort Richardson, Alaska 99505-6500

(907) 384-3268

SIC Code of the Facility: 9711 National Security

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### Section 2. Permit Continuity

1. Except as revised or rescinded herein or as superseded by an Air Quality Permit issued under AS 46.14.170, the Permittee shall comply with terms and conditions of Air Quality Control Permit to Operate No. 9331-AA003.

**2.** If permit terms and conditions listed in this permit conflict with those of Permit No. 9331-AA003, the Permittee shall comply with terms and conditions listed herein.

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### Section 3. Emission Information and Classification

Emissions of Regulated Air Contaminants, as provided in Permittee's application:

a. Particulate Matter (PM-10), Sulfur Oxides (SO<sub>2</sub>), Nitrogen Oxides (NO<sub>X</sub>), Carbon Monoxides (CO), and Volatile Organic Compounds (VOC).

### Construction Permit Classifications:

a. The Fort Wainwright project requires construction permit provisions requested by the owner or operator under 18 AAC 50.305(a)(3) and (a)(4).

Facility Classifications as described under 18 AAC 50.300(b) through (g), modifications as described under 18 AAC 50.300(h), or owner requested limit classification under 305(a)(1) through (4):

- a. Fort Wainwright is classified as a Prevention of Significant Deterioration (PSD) Major Facility as defined in: (1) 18 AAC 50.300(c)(1) because it has the potential to emit more than 250 tons per year of a regulated air contaminant in an area classified as attainment or unclassifiable; (2) 18 AAC 50.300(c)(2)(A) because it has the potential to emit more than 100 tons per year of a regulated air contaminant in an area designated attainment or unclassifiable and is a fossil-fuel-fired steam electric plant of more than 250 MMBtu/hr; and (3) 18 AAC 50.300(c)(2)(V) because it has the potential to emit more than 100 tons per year of a regulated air contaminant in an area designated attainment or unclassifiable and is a fossil-fuel-fired boiler or combination of boilers totaling more than 250 MMBtu/hr.
- b. Fort Wainwright is classified as a Nonattainment Area Major Facility as defined in 18 AAC 50.300(d) because it has the potential to emit more than 100 tons per year of a regulated air contaminant, carbon monoxide, in an area classified as nonattainment for that contaminant.
- c. The Permittee has requested limits to avoid the project's classification as a PSD significant modification under 18 AAC 50.300(h)(3) as provided by 18 AAC 50.305(a)(4).
- d. The Permittee has requested limits to avoid the project's classification as a non-attainment significant modification under 18 AAC 50.300(h)(5).
- e. The Permittee has requested limits to avoid the project's classification as a modification classified under 18 AAC 50.300(h)(2) with emission increases greater than allowable.

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### Section 4. Source Inventory and Description

Sources listed below have specific monitoring, record keeping, or reporting conditions in this permit. Source descriptions and ratings are given for identification purposes only. The total facility equipment inventory can be seen in Permit No. 9331-AA003 (insignificant sources are not listed).

**Table 1: Source Inventory** 

ID	Source Name	<b>Source Description</b>	Rating/Size		
Central Heating and Power Plant Emissions Reduction Project					
1	Coal-Fired Boiler 3	Wickes	230 MMBtu/hr		
2	Coal-Fired Boiler 4	Wickes	230 MMBtu/hr		
3	Coal-Fired Boiler 5	Wickes	230 MMBtu/hr		
4	Coal-Fired Boiler 6	Wickes	230 MMBtu/hr		
5	Coal-Fired Boiler 7	Wickes	230 MMBtu/hr		
6	Coal-Fired Boiler 8	Wickes	230 MMBtu/hr		
7	Propane Duct Burner 3	N/A	4 MMBtu/hr		
8	Propane Duct Burner 4	N/A	4 MMBtu/hr		
9	Propane Duct Burner 5	N/A	4 MMBtu/hr		
10	Propane Duct Burner 6	N/A	4 MMBtu/hr		
11	Propane Duct Burner 7	N/A	4 MMBtu/hr		
12	Propane Duct Burner 8	N/A	4 MMBtu/hr		
Central He	ating and Power Plant Upgrade Pro	ject			
13	13 Coal Preparation Plant N/A				
Bassett Arı	my Community Hospital Replacemen	nt Project			
14	Backup Diesel-Fired Boiler 1	N/A	19 MMBtu/hr		
15	Backup Diesel-Fired Boiler 2	N/A	19 MMBtu/hr		
16	Backup Diesel-Fired Boiler 3	N/A	19 MMBtu/hr		
17	Backup Diesel-Electric Generator 1	N/A	900 kW		
18	Backup Diesel-Electric Generator 2	N/A	900 kW		
19	Backup Diesel-Electric Generator 3	N/A	900 kW		
20	Diesel Storage Tank 1	N/A	15,850 gal		
21	Diesel Storage Tank 2	N/A	15,850 gal		
22	Diesel Storage Tank 3	N/A	15,850 gal		
23	Diesel Storage Tank 4	N/A	15,850 gal		
24	Diesel Storage Tank 5	N/A	15,850 gal		
25	Temporary Construction Heaters	N/A			
Installation	Restoration Plans				
26	Miscellaneous	IRP Restoration Activities	N/A		

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# Section 5. Ambient Air Quality Standards and Maximum Allowable Ambient Concentrations

- **3. General Description.** This permit contains terms and conditions to ensure that allowable emissions from the facility and associated growth will not cause an ambient concentration that exceeds the concentrations established in Table 6 of 18 AAC 50.310(d)(2) at any location that does not or would not meet the ambient air quality standard or maximum allowable ambient concentration.
- **4. Authorization and Notification Requirements.** The Permittee shall modify and operate the facility in accordance with the construction permit application and application supplements listed in Section 18, as may be currently applicable. This permit authorizes the Permittee to:
  - 4.1 Conduct a Central Heating and Power Plant emission reduction project including installing baghouse controls on Source IDs 1 through 6 and adding propane duct burners, Source IDs 7 through 12, upstream of baghouse controls for the purpose of pre-heating each of the baghouses;
  - 4.2 Conduct a Central Heating and Power Plant emission upgrade project, including the upgrade of the coal preparation plant, replacement of grates and grate seals, and changes to the ash handling system, Source ID 13;
  - 4.3 Conduct a Basset Army Community Hospital project including installation of Source IDs 14 through 25; and
  - 4.4 Continue a cleanup and restoration project including the operation of miscellaneous thermal oxidation units associated with the IRP restoration activities.

Notwithstanding the regulations set forth in 18 AAC 50.300(h), the Permittee shall notify the Department, in accordance with the following condition, prior to:

- 4.5 Installing a permanent stationary emission unit at the facility that is not listed in Exhibit A of Permit to Operate No. 9331-AA003 or Table 1 of this construction permit; or
- 4.6 Making a physical or operational change to a source listed in Exhibit A of Permit to Operate No. 9331-AA003 or Table 1 of this construction permit that would cause the design rating, capacity, or throughput to deviate from the description provided in Exhibit A of Permit to Operate No. 9331-AA003 or this construction permit.

4.7 Provide the Department a written notification of new equipment selection within 30 days after selection. Include a copy of vendor specifications sufficient to list make, model, serial number, maximum fuel firing rate(s), types of fuel the unit is designed to burn and stack parameters (height, exit diameter, exhaust flow-rate and maximum temperature).

4.8 At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain, and operate affected facilities including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of affected facilities.

[18 AAC 50.040(a)(1), 1/18/97] [18 AAC 50.320(a)(2)(A-E), 1/18/97] Final Permit No. 0031-AC059 Page 10 of 47

### Section 6. State Emission Standards

### Industrial Processes and Fuel Burning Equipment

Visible Emissions

5. The Permittee shall not cause or allow visible emissions, excluding condensed water vapor to reduce visibility through the exhaust effluent by greater than 20% for more than three minutes in any one-hour.

### 5.1 For Source IDs 1 through 12:

- a. Install and operate using baghouse control devices.
- b. Monitor and record visible emissions as provided in Condition 26. Monitor and record opacity for each successive 10-second period using Continuous Opacity Monitors (COMS) that meet 40 CFR 60.13(e)(1) monitoring specifications and per performance specification 1, 40 CFR 60, Appendix B operate and maintain the COMS as set out in Condition 8.6.

Except during COMS breakdowns, repairs, calibration checks, and zero and span adjustments, complete one cycle of sampling and analysis for each successive 10-second period of source operation. From this data, calculate and record an average opacity for successive and discrete one-minute periods (one minute block averages). In determining compliance, exclude a maximum of 6 consecutive one-minute block average opacities measured by the COMS in any one hour that are greater than 20% during periods of startup, shutdown, sootblowing, or grate cleaning, at any other time when a maximum of 3 or more consecutive one-minute block average opacities measured by the COMS are greater than 20%.

- c. Attach to the Facility Operating Report required by Condition 41, a print out from the COMS data acquisition system the date, time, and opacity reading of each 10-second value that is in excess of 20% opacity. Report non-compliance using the Excess Emission Notification Form in Section 17 if the total number of 10-second values that exceed 20% opacity is greater than 18 per hour.
- d. Attach a copy of the performance specification report, with calculations, to the Facility Operating Report for that quarter during which the operator completed verification of on-site specifications as set out in 40 CFR 60, Appendix B, PS-1.

### 5.2 For Source IDs 14 through 19, 25 and 26:

a. Monitor, record and report according to Section 14.

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[18 AAC 50.050(a)(2), 1/18/97] [18 AAC 50.055(a)(1), 1/18/97] [18 AAC 50.320(a)(2)(A-E), 1/18/97]

#### Particulate Matter

- **6.** The Permittee shall not cause or allow:
  - 6.1 Particulate matter emitted from Source IDs 1 through 12 to exceed 0.10 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours. The Permittee will comply with this standard by meeting the owner-requested limit of 0.05 gr/dscf as listed in Condition 15.1.
    - a. Monitor, record and report according to Section 14.

[18 AAC 50.055(b)(2), 1/18/97] [18 AAC 50.320(a)(2)(A-E), 1/18/97]

- 6.2 Particulate matter emitted from Source IDs 14 through 19 and 25 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.
  - a. Monitor, record and report according to Section 14.

[18 AAC 50.055(b)(1), 1/18/97] [18 AAC 50.320(a)(2)(A-E), 1/18/97]

### Sulfur Compound Emissions

- 7. The Permittee shall not cause or allow sulfur compound emissions, expressed as SO<sub>2</sub>, to exceed 500 PPM averaged over three hours.
  - 7.1 For Source IDs 1 through 6:
    - a. Burn each fuel with a fuel sulfur content not to exceed 0.26 percent by weight.
    - b. Obtain a statement of certification from the fuel supplier showing the sulfur content for each shipment delivered to the facility. If a certificate is not available from the supplier, analyze a representative sample of the fuel to determine the sulfur content using an approved ASTM method such as ASTM D3176-89, D3177-89 and D4239-94.
    - c. Analyze a representative sample of used oil for each batch to be burned in Source IDs 1 through 6 to determine the sulfur content using an approved ASTM method such as ASTM D975-94, D3120-92, D4152-90, D2622-91 and ASTM D396-92.
  - 7.2 For Source IDs 7 through 12, and 26:

- a. Burn a grade of propane with a fuel sulfur content not to exceed 250 PPM by weight.
- b. Obtain a statement of certification from the fuel supplier showing that all propane delivered to the facility complies with Condition 7.2a. If a certificate is not available from the supplier, analyze a representative sample of fuel to determine the sulfur content using an approved ASTM method such as ASTM D1265-92 and D2784-92.
- 7.3 For Source IDs 14 through 19, and 25:
  - a. Burn fuel oil that limits sulfur content to less than 0.30 percent by weight.

b.

- c. Obtain a statement of certification from the fuel supplier showing that all fuel oil delivered to the facility complies with condition 7.3 (a). If a certificate is not available from the supplier, analyze a representative sample of the fuel for each shipment delivered to the facility to determine the sulfur content using an approved ASTM method such as ASTM D975-94, D3120-92, D4152-90, D2622-91 and ASTM D396-92.
- 7.4 Report, in accordance with Condition 39, upon receipt of fuel that does not meet the requirements of Condition 7.1, 7.2 or 7.3. When reporting under this condition for Source IDs 1 through 6, 14 through 19 and 25, include a material balance calculation of the sulfur compound emissions, in PPM, expected from this fuel in accordance with Section 16.
- 7.5 Report in accordance with Condition 39 if a three-hour exhaust concentration, calculated in Condition 7.4, is greater than 500 PPM.
- 7.6 Keep records of the statements of certification, each calculated three-hour SO<sub>2</sub> concentration, and all test results and calculations required under Conditions 7.1, 7.2,
   7.3 and 7.4. Attach copies of the records with the Operating Report required by Condition 41.

[18 AAC 50.055(c), 1/18/97] [18 AAC 50.320(a)(2)(A-E), 1/18/97]

### Section 7. Federal Emission Standards

Comply with the requirements of 40 CFR 60, New Source Performance Standards (NSPS) as they apply to affected facilities specified below. Notify and report as set out below and as specified in Condition 40.

- **8. 40 CFR 60, Subpart A, General Provisions:** Affected facilities subject to only the record keeping requirements of Subpart Kb are exempt from the requirements of Subpart A. In accordance with 40 CFR 60, Subpart A and 18 AAC 50.040, for each construction, modification, or reconstruction of other affected facilities and sources regulated under 40 CFR 60:
  - 8.1 Notify the Department and EPA:
    - a. No later than 30 days after construction or reconstruction commencement in accordance with 40 CFR 60.7(a)(1);
    - b. No more than 15 days after start-up in accordance with 40 CFR 60.7(a)(3);
    - c. 60 days prior or as soon as practicable before modifying facilities that would be subject to NSPS as set out in 40 CFR 60.7(a)(4);
    - d. No less than 30 days prior to conducting a demonstration of continuous monitoring system performance as set out in 40 CFR 60.7(a)(5);
    - e. No less than 30 days prior to anticipated date for conducting opacity observations or using a continuous opacity monitoring system required by 60.11(e)(1), as set out in 40 CFR 60.7(a)(6) and (7); and
    - f. No less than 60 days prior to commencement of reconstruction or replacement of a facility, as defined in 40 CFR 60, notify the Department and EPA with information as set out in 40 CFR 60.14(d).
  - 8.2 For affected facilities regulated under 40 CFR 60, maintain records or occurrence and duration of start-up, shut-down, or malfunction of an affected facility, control equipment, or monitoring equipment as set out in 40 CFR 60.7(b). Submit continuous monitoring system performance reports as set out in 40 CFR 60.7(c) and (d). Maintain a file of measurements as set out in 40 CFR 60.7(e).
  - 8.3 For affected facilities regulated under 40 CFR 60, within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up and at such other times as may be required by the EPA under Section 114 of the U.S. Clean Air Act, conduct performance tests as follows:

- a. Notify the Department and EPA at least 30 days in advance of any performance test and opacity observation as set out in 40 CFR 60.8(d) and 60.11(e)(1);
- b. Conduct performance tests and data reduction as set out in 40 CFR 60.8(b) and (f);
- c. Provide the Department copies of EPA administrator approvals for alternative performance testing;
- d. Provide sampling ports and platform(s), safe access to platform(s), and utilities, and conduct testing as set out under 40 CFR 60.8(c) and (e); and
- e. Furnish the Department and EPA a copy of the performance test and opacity observations as set out in 40 CFR 60.8(a) and 60.11(e)(2) through (5).
- 8.4 **Good Air Pollution Control Practice.** At all times, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain, and operate affected facilities including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Department that may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance records, and inspections of affected facilities.
- 8.5 The Permittee is prohibited from concealing a violation of any applicable NSPS standard as set out in 40 CFR 60.12.
- 8.6 For continuous monitoring systems and devices required under NSPS:
  - a. Ensure all systems and devices are installed, calibrated, and operational as set out in 40 CFR 60.13(b), prior to conduction a performance test under 40 CFR 60.8:
  - b. Conduct a performance evaluation of continuous emission monitoring systems (CEMS) or continuous opacity monitoring systems (COMS) as set out in 40 CFR 60.13(c);
  - c. Conduct daily zero and span checks of CEMS and COMS as set out in 40 CFR 60.13(d);
  - d. Ensure all continuous monitoring systems meet the minimum frequency of operation requirements set out in 40 CFR 60.13(e), and are kept in continuous operation, except for system breakdowns, repairs, calibration checks, and zero/span adjustments;

- e. Install continuous monitoring systems to obtain representative emission or process parameters, as set out in 40 CFR 60.13(f);
- f. Reduce continuous monitoring system data as set out in 40 CFR 60.13(h); and
- g. Provide the Department a copy of each EPA alternative monitoring approval or relative accuracy test audit approval issued under 40 CFR 60.13(i) or (j).

[18 AAC 50.320(a)(2)(A-E), 1/18/97] [18 AAC 50.040(a)(1), 1/18/97]

### 9. 40 CFR 60, Subpart Dc, Steam Generating Units – Source IDs 14 through 16:

- 9.1 Applicability and delegation of authority, 40 CFR 60.40c. An affected facility is a steam-generating unit, which commenced construction, modification, or reconstruction after June 9, 1989, and has a maximum design heat capacity between 10 and 100 MMBtu/hr.
- 9.2 Standard for sulfur dioxide: On or after the date on which the initial performance test is completed or required to be completed, burn fuel oil with no greater than 0.5% by weight percent sulfur as set out in 40 CFR 60.42c(d). Compliance with the fuel oil sulfur limit under this section may be determined based on a certification from the fuel supplier as specified in 40 CFR 60.42c(h).
- 9.3 Standard for particulate matter: On or after the date upon which the initial performance test is completed or required to be completed, do not discharge into the atmosphere any gases which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity as set out in 40 CFR 60.43c(c).
- 9.4 The fuel oil sulfur limit and opacity standards apply at all times including periods of startup, shutdown, and malfunction as set out in 40 CFR 60.42c(i) and 60.43(d).
- 9.5 Compliance and performance test methods and procedures for sulfur dioxide, 40 CFR 60.43c:
  - a. If seeking to determine compliance with the fuel oil sulfur limit based on fuel shipment sampling, the initial performance test shall consist of sampling and analyzing the initial tank of oil to be fired in the unit to demonstrate that fuel oil sulfur content does not exceed 0.5% as set out in 40 CFR 60.44c(g). Thereafter, sample the oil in the tank after each shipment of oil is received as required in 40 CFR 60.46c(d)(2) and Condition 9.7.
  - b. If seeking to determine compliance with the fuel oil sulfur limit based on fuel supplier certification, the certification shall serve as the performance test as set out in 40 CFR 60.46c(h).

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9.6 Compliance and performance test methods and procedures for particulate matter, 40 CFR 60.44c:

- a. Conduct an initial performance test as required by 40 CFR 60.8 and Condition 8.3b to determine compliance with the opacity standard set out in Condition 9.3. Use Method 9 (6-minute average of 24 observations as set out in 40 CFR 60.45c(a)(7).
- b. Conduct subsequent performance tests as requested by the EPA to determine compliance with the opacity standard as set out in 40 CFR 60.45c(a).
- 9.7 Emission monitoring for sulfur dioxide, 40 CFR 60.45c:
  - a. If electing to sample fuel shipments, collect oil samples from the fuel tank immediately after the fuel tank is filled and before any oil is combusted. Analyze the oil to determine the sulfur content. If filling a partially full tank, conduct a new analysis upon filling. Use the results of each analysis to determine the daily average value when determining the 30-day rolling compliance. If the sample is greater than 0.5%, ensure that subsequent shipments of fuel oil are low enough to cause the 30-day rolling average to be 0.5% or less as set out in 40 CFR 60.46c(d)(2).
  - b. If electing to determine compliance with the 0.5% fuel sulfur limit using fuel supplier certification, then sulfur monitoring under Condition 9.7 is not required as specified under 40 CFR 60.46c(e).
- 9.8 Reporting and record keeping requirements, 40 CFR 60.48c:
  - a. Include in the construction notification required under 40 CFR 60.7 and Condition 8.1, the information listed in 40 CFR 60.48c(a) consisting of:
    - (i) The design heat input capacity of the unit and fuel identification;
    - (ii) Any Federally enforceable requirement that limits the annual capacity factor for any fuel or fuel mixtures; and
    - (iii) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each fuel fired.
  - b. Submit to EPA and the Department the performance test data from the initial and subsequent performance tests for fuel sulfur and opacity as set out in 40 CFR 60.48c(b).

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c. Submit quarterly reports to EPA and attach a copy to the facility operating report as required by Condition 41. Submit the initial quarterly report postmarked by the 30<sup>th</sup> day of the third month following completion of the initial performance test. Submit subsequent quarterly reports postmarked by the 30<sup>th</sup> day following the end of the reporting period. Include the following information as set out in 40 CFR 60.48c(d) and (e):

- (i) Calendar dates covered by the reporting period;
- (ii) Each 30 rolling day average fuel sulfur content calculated during the quarter, ending with the last 30 day period in the quarter. List the reasons for any period of non-compliance;
- (iii) Identification of the types of fuel combusted;
- (iv) Identification whether averages are based on CEMS data or on manual methods; and
- (v) If electing to use fuel supplier certification, attach the records of fuel supplier certification and include a certified statement signed by the responsible official of the owner or operator that the records of the fuel supplier certifications submitted represent all of the fuel combusted during the quarter.
- d. Ensure that the fuel supplier certification contains the following information for distillate fuel as set out in 40 CFR 60.48c(f):
  - (i) The name of the oil supplier; and
  - (ii) A statement from the oil supplier that the oil meets the specifications of fuel oil No. 1 or No. 2, as defined by the American Society for Testing and Materials in ASTM D-396-78.
- e. Except as provided for in an U.S. EPA alternative record keeping schedule or waiver, record and maintain records of the amounts of each fuel combusted during each day as set out in 40 CFR 60.48c(g).
- f. Maintain the records in accordance with Condition 38 in order to comply with the two-year record retention schedule listed in 40 CFR 60.48c(h). Keep a copy of all EPA issued waivers and alternative schedules with the permit at the facility.

[18 AAC 50.320(a)(2)(A-E), 1/18/97] [18 AAC 50.040(a)(2)(E), 1/18/97] Final Permit No. 0031-AC059 Page 18 of 47

### 10. 40 CFR 60, Subpart Kb, Stationary Tanks – Source IDs 20 through 24:

10.1 Applicability and designation of affected facility, 40 CFR 60.110b. Volatile organic liquid storage tanks greater than 40 cubic meters in volume (10,567 gallons) for which construction, reconstruction, or modification commenced after July 23, 1984, are subject to this Subpart as listed in 40 CFR 60.110b(a).

10.2 Monitoring of operations, 40 CFR 60.116b. Pursuant to 40 CFR 60.116b(a) and (b), keep readily accessible records showing the dimension of the storage vessels and an analysis showing the capacity of the storage vessel for each storage tank greater than equal to 40 cubic meters (10,567 gallons) for the life of the tank.

[18 AAC 50.320(a)(2)(A-E), 1/18/97] [18 AAC 50.040(a)(2)(M), 1/18/97]

### 11. 40 CFR 60, Subpart Y, Coal Preparation Plants – Source ID 13:

- 11.1 Applicability and designation of affected facility, 40 CFR 60.250a. An affected facility is a coal preparation plant, which processes more than 200 tons per day and commenced construction or modification after October 24, 1974.
- 11.2 Standards for particulate matter, 40 CFR 60.252. The Permittee shall not cause to be emitted into the atmosphere gases which exhibit 20 percent opacity or greater.
- 11.3 Test methods and procedures, 40 CFR 60.254. Performance testing shall be conducted for Source ID 13 in accordance with reference methods and procedures in Appendix A as set out in Condition 8.3b and 40 CFR 60.8.

[18 AAC 50.320(a)(2)(A-E), 1/18/97] [18 AAC 50.040(a)(2)(T), 1/18/97]

Issue Date: February1, 2001

# Section 8. Owner Requested Limits to Avoid Classification as a PSD Major Modification

- **12. Nitrogen Oxides and Carbon Monoxide Requirements.** The Permittee shall avoid classification as a Prevention of Significant Deterioration major modification under 18 AAC 50.300(h)(3)(B)(ii) for NO<sub>X</sub> and 18 AAC 50.300(h)(2) for CO as follows:
  - 12.1 Limit the annual coal consumption to a cumulative total of 336,000 tons per 12-month period for Source IDs 1 through 6.
    - a. Monitor and record the cumulative total monthly coal consumption for Source IDs 1 though 6. Calculate and record the cumulative 12-month rolling total coal consumption.
    - b. Report in the Operating Report required by Condition 41, the cumulative monthly and 12-month rolling total coal consumption for Source IDs 1 through 6.
    - c. Conduct two NO<sub>X</sub> source tests on each of Source IDs 1 through 6. Conduct the first source test within 180 days prior to shutdown for the emission reduction project and the upgrade project. Conduct the second emission source test within 60 days after achieving the maximum firing rate, but no later than 180 days after startup upon completion of project tasks for that boiler. Conduct each test burning coal at the maximum burning or operating capacity of the unit. Source test in accordance with the monitoring, recording, and reporting requirements set forth in Section 11. Determine the NO<sub>X</sub> emission factors for each unit, before and after the projects, using exhaust properties determined by both Method 19 and exhaust gas measurements as set out in Section 11.
    - d. If emission factors derived from the second emission source tests in Condition 12.1c are greater than those of the first source test, then submit to the Department within 30 days of test date an analysis demonstrating that project emissions burning the amount of coal in Condition 12.1 will not increase in excess of 40 tons per year of NO<sub>X</sub>.
    - e. Calibrate, certify, operate, and maintain, in accordance with Condition 33, a continuous carbon monoxide and oxygen emission monitoring system (CEMS) to measure CO and O<sub>2</sub> emissions in the exhaust of each of Source IDs 1 through 6. The Permittee shall continuously monitor and record CO and O<sub>2</sub> emissions based upon carbon monoxide exhaust concentration measurements.
    - f. Calculate and record the daily average CO emission rates for each of Source IDs 1 through 6 based on the methodology set out in 40 C.F.R. 60, Appendix A, Method 19 as follows:

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 $E = C_d F_d [20.9/(20.9 - O_{2d})]$ 

Where: E = CO Emission Rate (lb/MMBtu)

 $C_d$  = Concentration of dry CO (lb/scf)

 $F_d$  = Fuel Factor on a dry basis, (scf/MMBtu)  $O_{2d}$  = Percent Oxygen on a dry basis, %

Use an average F factor calculated using the procedures listed in 40 C.F.R. 60 Appendix A, Method 19, Part 3.2.1.

- g. Attach to the Operating Report required by Condition 41 the CO CEMS reports as set out in Condition 33. Attach a table of daily average carbon monoxide emissions from Source IDs 1 through 6. Document the date, time, and duration for which the continuous monitoring system required under Condition 12.1e is out-of-bounds, not recording data, or inoperable. Report each periodic cylinder gas audit and Relative Accuracy Test Audit results conducted during the report period.
- 12.2 Limit the cumulative total NO<sub>X</sub> emissions for Sources IDs 7 through 12 and 26 to two tons per 12-month rolling period.
  - a. Monitor and record the cumulative total monthly  $NO_X$  emissions for Source IDs 7 though 12 and 26. Calculate and record the cumulative 12-month rolling total  $NO_X$  emissions using the run time for each burner system, the maximum designed burner output, and the following  $NO_X$  emission factor: 0.210 lbs/MMBtu.
  - b. Report in the Operating Report required by Condition 41, the cumulative monthly and 12-month rolling total  $NO_X$  emissions for Source IDs 7 through 12 and 26.
- 12.3 Limit operation of Source IDs 14 through 16 to less than a cumulative total of 600 hours per 12-month rolling period.
  - Monitor and record the time, date, and duration for which each of Source IDs 14 through 16 operate. Calculate and record the cumulative total hours of operation per 12-month period.
  - b. Report the cumulative total hours of operation per 12-month rolling period for Source IDs 14 through 16. Report as excess emissions under Condition 39 for any period in which operations deviate from Condition 12.3.
- 12.4 Limit operation of Source IDs 17 through 19 to less than a cumulative total of 600 hours per 12-month rolling period.

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a. Monitor and record the time, date, and duration for which each of Source IDs 17 through 19 operate. Calculate and record the cumulative total hours of operation per 12-month period.

- b. Report the cumulative total hours of operation per 12-month rolling period for Source IDs 14 through 16. Report as excess emissions under Condition 39 for any period in which operations deviate from Condition 12.4.
- 12.5 The Permittee shall not perform fire-fighting training on wooden structures.
- **13. Volatile Organic Compound Requirements.** The Permittee shall avoid classification as a Prevention of Significant Deterioration major modification under 18 AAC 50.300(h)(3)(B)(vi) for VOC as follows:
  - 13.1 Limit VOC emissions from Source ID 26 (IRP restoration activities) to no more than 30 tons per 12-month rolling period.
    - a. Obtain exhaust stream grab samples from each IRP restoration activity at the following intervals: 1) monthly sampling for new sites, 2) semi-annual sampling for oxidizer sites, and 3) semi-annual sampling for all active sites. Analyze for total VOCs using EPA Method TO-12. Record all analytical results in units of mass per unit volume.
    - b. Calculate and record VOC emissions for each IRP restoration activity using the hours of operation for each month, and the highest measured flow-rate and highest measured analytically determined concentrations of VOCs determined during the test interval conducted in Condition 13.1a.
    - c. Maintain a log of all IRP restoration activities documenting site activity descriptions, dates and total duration of activities.
    - d. Except as set out in Conditions 13.1a, 13.1b and 13.1c, follow the procedures set out in the VOC Tracking Plan submitted in the October 2, 2000 application.
    - e. Report to the Department in the Operating Report required by Condition 41, the monthly and 12-month rolling total VOC emissions from Source ID 26 (IRP restoration activities).
    - f. Provide written notice to the Air Permits Program within 10 days after startup of a new IRP restoration activity. List the location, the contaminant preliminary test results showing extent and magnitude of contamination, proposed emission control strategy and proposed air monitoring strategy for the restoration activity.

[18 AAC 50.320(a)(2), 1/18/97]

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### Section 9. Owner Requested Revised Permit Limits

The Permittee shall comply with terms and conditions in Permit No. 9331-AA003, except as revised below:

- **14.** Condition 3 in Permit to Operate 9331-AA003 is revised as follows:
  - 14.1 The Permittee shall limit the monthly-average steam production to 150,000 pounds per hour for each of six (6) boilers, Source IDs 1 through 6.
    - a. Calculate and record the average daily steam production rate (lb/hr) based on the hours of operation per day and steam production readings recorded at no less than 10 minute intervals.
    - b. Report the maximum monthly-average steam production rate (lb/hr) for each of Source IDs 1 through 6. Report as excess emissions under Condition 39 for any period in which operations deviate from Condition 14.1.
  - 14.2 The Permittee shall not use coal containing greater than 30 percent fines content (material passing the No. 8 sieve) by weight for Source IDs 1 through 6.
    - a. Analyze a representative sample of coal for each shipment delivered to the facility to determine the fines content using an approved ASTM method such as ASTM D197-87.
    - b. Report in the Operating Report required by Condition 41, results of each analysis conducted pursuant to Condition 14.2a.
- **15.** Exhibit B, Item A of Permit to Operate 9331-AA003 is revised as follows:
  - 15.1 The Permittee shall limit  $PM_{10}$  emissions to 0.05 grains per dry standard cubic foot for Source IDs 1 through 6.
    - a. Conduct an emission source test on each of Source IDs 1 through 6 subject to the schedule for the second test set out in Condition 12.1c.
    - b. Monitor, record and report according to Section 11 and Section 14.

[18 AAC 50.320(a)(2), 1/18/97]

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### Section 10. Generally Applicable Requirements

**16. Asbestos NESHAP.** The Permittee shall comply with the requirements set forth in 40 CFR 61.145, 61.150, and 61.152, and the applicable sections set forth in 40 CFR 61, Subpart A and Appendix A.

[18 AAC 50.040(b)(3), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97] [Federal Citation: 40 CFR 61, Subpart M, 12/19/96]

**17. Refrigerant Recycling and Disposal.** The Permittee shall comply with the standards for recycling and emission reduction of refrigerants set forth in 40 CFR 82, Subpart F.

[18 AAC 50.040(d), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97] [Federal Citation: 40 CFR 82, Subpart F, 7/1/97]

**18. Good Air Pollution Control Practice.** The Permittee shall install, maintain and operate, in accordance with manufacturer's procedures, fuel burning equipment, process equipment, emission control devices, testing equipment and monitoring equipment to provide optimum control of air contaminant emissions during all operating periods. This condition is not federally-enforceable.

[18 AAC 50.030, 1/18/97] [18 AAC 50.320(a)(2)(A), 1/18/97]

19. Dilution. The Permittee shall not dilute emissions with air to comply with this permit.

[18 AAC 50.045(a), 1/18/97]

- 19.1 Check all ductwork and exhaust systems for leaks, and repair any leaks found:
  - a. No sooner than 30 days prior to conducting a source test to demonstrate compliance with this permit;
  - b. Once during the first six months of this permit and every 17,520 hours of source operation thereafter for sources subject to visible emission observations conducted pursuant to Section 15; or
  - c. Once during the life of this permit for any other source regulated by this permit.

[18 AAC 50.320(a)(2), 1/18/97]

19.2 Keep records of all inspections and repairs performed under this condition.

[18 AAC 50.320(a)(2)(D), 1/18/97]

19.3 Upon request of the Department, submit copies of the records.

[18 AAC 50.320(a)(2)(E), 1/18/97]

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**20. Modification** The Permittee shall not construct, operate, or modify a source that will result in a violation of the applicable emission standards or that will interfere with the attainment or maintenance of the ambient air quality standards or maximum allowable ambient concentrations.

[18 AAC 50.045(c), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97]

20.1 Obtain all permits or permit revisions required for construction, modification, or operation under 18 AAC 50 and AS 46.14.

[18 AAC 50.320(a)(2), 1/18/97]

20.2 Comply with the conditions of all permits obtained under 18 AAC 50 and AS 46.14.

[18 AAC 50.320(a)(2), 1/18/97]

**21. Bulk Materials Handling, Construction and Industrial Activities.** The Permittee shall take reasonable precautions to prevent particulate matter from being emitted into the ambient air as a result of industrial activities, construction projects, or the handling, transportation, and storage of bulk materials.

[18 AAC 50.040(e) & 18 AAC 50.045(d), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97]

- 21.1 Keep records describing all precautions taken to prevent particulate matter from becoming airborne due to any of the activities described in this condition. If the precautions taken by the Permittee are not listed in the State Air Quality Control Plan, also record a statement describing why the Permittee finds the precaution reasonable. Reasonable precautions, as listed in the State Air Quality Control Plan, include:
  - a. Installation and use of hoods, fans, and dust collectors to enclose and vent the handling of dusty materials;
  - b. Use of water or chemicals for dust control in the demolition of existing structures, construction operations, road grading, or land clearing; and
  - c. Application of asphalt, oil, water, or suitable chemicals on dirt roads, material stockpiles and other surfaces which can create airborne dusts.

[18 AAC 50.040(e) & 18 AAC 50.320(a)(2)(A-E), 1/18/97]

- 21.2 At least once each month, perform visual surveys of fugitive particulate matter sources as follows:
  - a. Conduct a survey of all bulk materials handling, construction and industrial activities at the facility for the potential of airborne particulate matter in accordance with the procedures listed in 40 CFR 60, Appendix A, RM 22.

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b. Within 2 days of discovering that particulate matter emissions are leaving the property at a level which potentially could unreasonably interfere with the enjoyment of life or property, be injurious to human health or welfare, animal or plant life, or property, or cause an exceedance of a PM-10 ambient air quality standard or increment contained in 18 AAC 50.010(1) or 18 AAC 50.020(b)(2), initiate corrective actions to prevent emissions from leaving the property.

- c. Keep contemporaneous records of all visual surveys performed and corrective actions taken to prevent particulate matter emissions from leaving the property. Submit summaries of the records with the report required by Condition 41 of this permit.
- d. Submit a report in accordance with Condition 39 whenever a visual survey reveals that particulate matter emissions at levels specified in Condition 21.2b are leaving the property.

[18 AAC 50.320(a)(2)(A-E), 1/18/97]

**22. Stack Injection.** The Permittee shall not release materials other than process emissions, products of combustion, or materials introduced to control pollutant emissions from a stack at a source constructed or modified after November 1, 1982, unless approved in writing by the Department.

[18 AAC 50.055(g) & 18 AAC 50.310(m), 1/18/97]

- **23. Open Burning.** The Permittee shall comply with the following requirements when conducting open burning at the facility:
  - 23.1 Open burning of asphalts, rubber products, plastics, tars, oils, oily wastes, contaminated oil cleanup materials, or other materials in a way that gives off black smoke is prohibited without written approval of the Department in accordance with the procedures set forth in 18 AAC 50.065.

[18 AAC 50.040(e) & 18 AAC 50.065(b), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97]

23.2 Open burning or incineration of pesticides, halogenated organic compounds, cyanic compounds, or polyurethane products in a way that gives off black smoke or acidic gases or particulate matter is prohibited.

[18 AAC 50.040(e) & 18 AAC 50.065(b), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97]

23.3 Open burning of putrescible garbage, animal carcasses, or petroleum-based materials, including materials contaminated with petroleum or petroleum derivatives, is prohibited if it causes odor or black smoke that has an adverse effect on nearby persons or property.

[18 AAC 50.040(e) & 18 AAC 50.065(b), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97] Final Permit No. 0031-AC059 Page 26 of 47

23.4 Open burning is prohibited in an area if the Department declares an air quality advisory under 18 AAC 50.245, stating that open burning is not permitted in that area for the day.

[18 AAC 50.040(e) & 18 AAC 50.065(b), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97]

- 23.5 When conducting open burning, the Permittee shall ensure that:
  - a. The material is kept as dry as possible through the use of cover or dry storage;
  - b. Before igniting the burn, noncombustibles are separated to the greatest extent practicable;
  - c. Natural or artificially induced draft is present;
  - d. To the greatest extent practicable, combustibles are separated from grass or peat layer;
  - e. Combustibles are not allowed to smolder; and
  - f. Sufficient written records are kept to demonstrate that the Permittee complies with the limitations in this condition. Upon request of the Department, submit copies of the records.

[18 AAC 50.040(e), 18 AAC 50.065(a), & 18 AAC 50.335(g - h), 1/18/97 & 6/21/98] [18 AAC 50.320(a)(2), 1/18/97]

**24. Air Pollution Prohibited.** The Permittee shall not cause any emission which is injurious to human health or welfare, animal or plant life, or property, or which would unreasonably interfere with the enjoyment of life or property.

[18 AAC 50.110, 5/26/72] [18 AAC 50.040(e), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97]

24.1 Within 24 hours of receiving a complaint that is attributable to emissions from the facility, investigate the complaint and initiate corrective actions to alleviate or eliminate the cause of the complaint.

[18 AAC 50.320(a)(2)(A-C), 1/18/97]

24.2 Keep records of the date, time, and nature of all complaints received and summary of the investigation and corrective actions undertaken for complaints attributable to emissions from the facility. Upon request of the Department, submit copies of the records.

[18 AAC 50.320(a)(2)(D-Ei), 1/18/97]

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**25. Technology-Based Emission Standard.** If an unavoidable emergency, malfunction, or non-routine repair, as defined in 18 AAC 50.235, causes emissions in excess of a technology-based emission standard listed in Conditions 16 and 17, the Permittee shall take all reasonable steps to minimize levels of emissions that exceed the standard.

[18 AAC 50.235(a), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97]

Issue Date: February1, 2001

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### Section 11. General Source Testing and Monitoring Requirements

**26. Requested Source Tests.** In addition to any source testing explicitly required by this permit, the Permittee shall conduct source testing as requested by the Department to determine compliance with applicable permit requirements.

[18 AAC 50.220(a), 18 AAC 50.345(a)(10), 1/18/97]

- **27. Operating Conditions.** Unless otherwise specified by an applicable requirement or test method, the Permittee shall conduct source testing:
  - 27.1 At a point or points that characterize the actual discharge to into the ambient air; and
  - 27.2 At the maximum rated burning or operating capacity of the source or another rate determined by the Department to characterize the actual discharge into the ambient air.

[18 AAC 50.220(b) & (c), 1/18/97] [18 AAC 50.320(a)(2)(A-C), 1/18/97]

- **28. Reference Test Methods.** The Permittee shall use the following as reference test methods when conducting source testing for compliance with this permit:
  - 28.1 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(a) must be conducted in accordance with the methods and procedures specified in 40 CFR 60.

[18 AAC 50.220(b) & (c), 1/18/97] [18 AAC 50.320(a)(2)(A-C), 1/18/97]

28.2 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(b) must be conducted in accordance with the methods and procedures specified in 40 CFR 61.

[18 AAC 50.220(b) & (c), 1/18/97] [18 AAC 50.320(a)(2)(A-C), 1/18/97]

28.3 Source testing for compliance with requirements adopted by reference in 18 AAC 50.040(c) must be conducted in accordance with the source test methods and procedures specified in 40 CFR 63.

[18 AAC 50.220(b) & (c), 1/18/97] [18 AAC 50.320(a)(2)(A-C), 1/18/97]

28.4 Source testing for the reduction in visibility through the exhaust effluent must be conducted in accordance with the procedures set out in Section 15 of this permit. Visibility source testing is exempt from the requirements listed in Conditions 30 though 32. Except as otherwise directed by the Department, attach visible emission source testing results to the Facility Operating Report required by Condition 41 of this permit.

[18 AAC 50.220(b) & (c), 1/18/97] [18 AAC 50.320(a)(2)(A-C), 1/18/97] Final Permit No. 0031-AC059 Page 29 of 47

28.5 Source testing for emissions of particulate matter, sulfur compounds, nitrogen compounds, carbon monoxide, lead, volatile organic compounds, fluorides, sulfuric acid mist, municipal waste combustor organics, metals, and acid gases must be conducted in accordance with the methods and procedures specified 40 CFR 60, Appendix A.

[18 AAC 50.220(b) & (c), 1/18/97] [18 AAC 50.320(a)(2)(A-C), 1/18/97]

28.6 Source testing for emissions of PM-10 must be conducted in accordance with the procedures specified in 40 CFR 51, Appendix M.

[18 AAC 50.220(b) & (c), 1/18/97] [18 AAC 50.320(a)(2)(A-C), 1/18/97]

28.7 Source testing for emissions of any contaminant may be determined using an alternative method approved by the Department in accordance with Method 301 in Appendix A to 40 CFR 63.

[18 AAC 50.220(b) & (c), 1/18/97] [18 AAC 50.320(a)(2)(A-C), 1/18/97]

**29. Excess Air Requirements.** To determine compliance with this permit, standard exhaust gas volumes must only include the volume of gases formed from the theoretical combustion of fuel, plus the excess air volume normal for the specific source type, corrected to standard conditions (dry gas at 70° F and an absolute pressure of 760 millimeters of mercury).

[18 AAC 50.220(b) & (c), 1/18/97] [18 AAC 50.320(a)(2)(A-C), 1/18/97] [18 AAC 50.990(88), 1/18/97]

**30. Test Plans.** Before conducting any source tests, the Permittee shall submit a plan to the Department. The plan must include the methods and procedures to be used for sampling, testing, and quality assurance, and must specify how the source will operate during the test and how the Permittee will document this operation. A complete plan must be submitted within 60 days of receiving a request under Condition 26 and at least 30 days before the scheduled date of any tests.

[18 AAC 50.345(a)(10), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97] [18 AAC 50.320(a)(2)(A-C), 1/18/97]

**31. Test Notification.** At least 10 days before conducting a source test, the Permittee shall give the Department written notice of the date and time the source test will begin.

[18 AAC 50.345(a)(10), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97] [18 AAC 50.335(g), 1/18/97] **32. Test Reports.** Within 45 days after completing a source test, the Permittee shall submit two copies of the results, to the extent practical, in the format set out in the *Source Test Report Outline* of Volume III, Section IV.3 of the State Air Quality Control Plan, adopted by reference in 18 AAC 50.030(8). The Permittee shall certify the results as set out in Condition 35 of this permit.

[18 AAC 50.345(a)(10), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97] [18 AAC 50.320(a)(2)(D), 1/18/97]

33. Continuous Monitoring Systems. If required by terms and conditions of this permit, install, calibrate, conduct applicable continuous monitoring system performance specification tests listed in 40 C.F.R. 60, Appendix B, effective July 1, 1997, and certify test results; operate; and maintain air contaminant emissions and process monitoring equipment on the sources as described herein and in documents provided by the Permittee, listed in Section 18 Submit monitoring equipment siting, operating, maintenance plans, and procedures for approval by the Department.

For continuous emission monitoring systems, comply with each applicable monitoring system requirement, as listed in 40 C.F.R. 60.13, 60.19, 40 C.F.R. 60, Appendix A, Method 19, Appendix B, Performance Specifications 4, 4A and 6, and Appendix F, and the *EPA Quality Assurance Handbook For Air Pollution Measurements Systems*, EPA/600 R094/038b, effective July 1, 1997. Attach to the Facility Operating Report required by Condition 41: 1) a copy of each quarterly continuous emission monitoring system data assessment report for Quality Assurance Procedures conducted in accordance with 40 C.F.R. 60, Appendix F; and 2) a copy of each quarterly monitoring system's performance report in accordance with 40 C.F.R. 60.7.

**34. Particulate Matter Calculations.** In source testing for compliance with the particulate matter standards in Condition 6.1 and 15.1, for Source IDs 1 through 6, the three-hour average is determined using the average of three one-hour test runs. The source testing must account for those emissions caused by soot blowing, grate cleaning, or other routine maintenance activities, the periodic use of used oil, or any other non-routine operating parameter, by ensuring that at least one test run includes the emissions causes by the non-steady state activity and is conducted under conditions that lead to representative emissions from the activity. The emissions must be quantified using the following equation:

$$E = E_{M} \left[ (A + B) \times \frac{S}{R \times A} \right] + E_{NM} \left[ \frac{(R - S)}{R} - \frac{B \times S}{R \times A} \right]$$

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#### Where:

E= the total particulate matter emissions of the source in grains per dry standard cubic foot (gr/dscf).

 $E_{M}$ = the particulate matter emissions in gr/dscf measured during the test that included the routine maintenance activity.

 $E_{NM}$ = the arithmetic average of particulate emissions in gr/dscf measured during by the test runs that did not include the maintenance activity.

A= the period of routine maintenance activity occurring during the test run that included routine maintenance activity, expressed to the nearest hundredth of an hour.

B= the total period of the test run, less A.

R= the maximum period of source operation per 24 hours, expressed to the nearest hundredth of an hour.

S= the maximum period of routine maintenance activity per 24 hours, expressed to the nearest hundredth of an hour.

[18 AAC 50.220(f), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97]] Final Permit No. 0031-AC059 Page 32 of 47

# Section 12. General Record Keeping, Reporting, and Compliance Certification Requirements

35. Certification. The Permittee shall certify all reports, compliance certifications, or other documents submitted to the Department under this permit by including the signature of a responsible official for the permitted facility following the statement: "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete." For the same six-month reporting period, the excess emission reports submitted pursuant to Condition 39 may be certified with the operating report required by Condition 41 of this permit. All other reports must be certified upon submittal.

[18 AAC 50.205, 1/18/97] [18 AAC 50.345(a)(9), 1/18/97] [18 AAC 50.320(a)(2) & 18 AAC 50.320(a)(2)(E), 1/18/97]

**36. Submittals.** Unless otherwise directed by the Department or this permit, the Permittee shall send reports, compliance certifications, and other documents required by this permit to ADEC, Air Permits Program, 610 University Ave., Fairbanks, AK 99709-3643, ATTN: Compliance Technician.

[18 AAC 50.320(a)(2)(E), 1/18/97]

37. Information Requests. The Permittee shall furnish to the Department, within a reasonable time, any information the Department requests in writing to determine whether cause exists to modify, revoke and reissue, or terminate the permit or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records required to be kept by this permit. The Department, in its discretion, will require the Permittee to furnish copies of those records directly to the federal administrator.

[18 AAC 50.200, 1/18/97] [18 AAC 50.345(a)(8), 1/18/97] [18 AAC 50.320(a)(2) & 18 AAC 50.320(a)(2)(A-E), 1/18/97]

- **38. Record Keeping Requirements.** The Permittee shall keep all records required by this permit for at least five years after the date of collection, including:
  - 38.1 Copies of all reports and certifications submitted pursuant to this Section of this permit.
  - 38.2 Records of all monitoring required by this permit, and information about the monitoring including:
    - a. Calibration and maintenance records, original strip chart or computer-based recordings for continuous monitoring instrumentation;
    - b. Sampling dates and times of sampling and measurements;
    - c. The operating conditions that existed at the time of sampling or measurement;

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- d. The date analyses were performed;
- e. The location where samples were taken;
- f. The company or entity that performed the sampling and analyses;
- g. The analytical techniques or methods used in the analyses; and
- h. The results of the analyses.

[18 AAC 50.320(a)(2)(D), 1/18/97]

**39.** Excess Emission and Permit Deviation Reports. The Permittee shall report all emissions or operations that exceed or deviate from the requirements of this permit or that present a potential threat to human health or safety as soon as possible, but no later than 48 hours, after the event commences. The report must include the information listed on the form contained in Section 17 of this permit. The Permittee may use this form to report emissions under this condition.

[18 AAC 50.235(a)(2) & 18 AAC 50.240(c), 1/18/97] [18 AAC 50.320(a)(2)(E), 1/18/97]

- **40. NSPS and NESHAP Reports.** The Permittee shall submit to the Department copies of reports required by Conditions 8 through 11, and 16 as they apply to the facility as follows:
  - 40.1 Attach a copy of any NSPS and NESHAPs reports submitted to the U.S. Environmental Protection Agency (EPA) Region 10 to the Operating Report required by Condition 41.
  - 40.2 The Permittee shall notify the Department of any EPA granted waivers of NSPS or NESHAPs emission standards, record keeping, monitoring, performance testing, or reporting requirements within 30 days after the Permittee receives a waiver.

[18 AAC 50.040, 1/18/97] [Federal Citation 40 CFR 60 & 40 CFR 61, 7/1/97]

- 41. Operating Reports. During the life of this permit, the Permittee shall submit an original and two copies of an operating report as set out in Condition 10 of Permit No. 9331-AA003. This report must include copies of the records required to be reported by the conditions of this permit. In addition, the report must include a listing of all deviations from the requirements of this permit that occurred during the reporting period. For each deviation, the report must identify:
  - 41.1 The date of the deviation;
  - 41.2 The equipment involved;
  - 41.3 The permit condition;
  - 41.4 A description of the deviation; and

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41.5 Any corrective action or preventive measures taken and the date of such actions.

[18 AAC 50.320(a)(2)(A-E), 1/18/97]

Issue Date: February1, 2001

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### Section 13. Standard Conditions Not Otherwise Included in the Permit

**42.** Consistent with Alaska law, for purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any standard in this permit, nothing in this permit precludes the use of any credible evidence of information relevant to whether the facility would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[18 AAC 50.320(a)(2), 1/18/97] [Federal Citation: 40 CFR 52.12(c), 7/1/99]

- 43. The Permittee must comply with each permit term and condition. Noncompliance constitutes a violation of AS 46.14, 18 AAC 50, and the Clean Air Act, except for those requirements designated as not federally-enforceable, and is grounds for:
  - 43.1 An enforcement action;
  - 43.2 Permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280; or
  - 43.3 Denial of a construction permit renewal application.

[18 AAC 50.345(a)(1), 1/18/97] [18 AAC 50.320(a)(1), 1/18/97]

**44.** It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.

[18 AAC 50.345(a)(2), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97]

**45.** Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of this permit.

[18 AAC 50.345(a)(3), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97]

- **46.** Compliance with permit terms and conditions is considered to be compliance with those requirements that are:
  - 46.1 Included and specifically identified in the permit; or
  - 46.2 Determined in writing in the permit to be inapplicable.

[18 AAC 50.345(a)(4), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97] Final Permit No. 0031-AC059 Page 36 of 47

**47.** The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any construction permit condition.

[18 AAC 50.345(a)(5), 1/18/97] [18 AAC 50.320(a-c), 1/18/97]

**48.** The permit does not convey any property rights of any sort, nor any exclusive privilege.

[18 AAC 50.345(a)(6), 1/18/97] [18 AAC 50.320(b), 1/18/97]

- **49.** The Permittee shall allow an officer or employee of the Department or an inspector authorized by the Department, upon presentation of credentials and at reasonable times with the consent of the owner or operator, to:
  - 49.1 Enter upon the premises where a source subject to the construction permit is located or where records required by the permit are kept;
  - 49.2 Have access to and copy any records required by the permit;
  - 49.3 Inspect any facilities, equipment, practices, or operations regulated by or referenced in the permit; and
  - 49.4 Sample or monitor substances or parameters to assure compliance with the permit or other applicable requirements.

[18 AAC 50.345(a)(7), 1/18/97] [18 AAC 50.320(a)(2), 1/18/97] Final Permit No. 0031-AC059 Page 37 of 47

### Section 14. Visible Emissions and Particulate Matter Monitoring Plan

### Visible Emissions Observations

**50.** Except as provided in Conditions 51 and 53, the Permittee shall observe visible emissions in the exhaust of each Source IDs 14 through 19, 25 and fuel burning equipment or incinerators associated with Source ID 26 as follows:

- 50.1 **Method 9 Plan.** Within 6 months after installation date, the issue date of this permit, or within seven calendar days after changing from the Smoke/No Smoke Plan, whichever is later, and at least once every 1,000 hours that a source operates thereafter, observe its exhaust for 6 minutes to obtain 24 individual 15-second readings in accordance with Section 15 of this permit; and
  - a. If two or more individual 15-second readings during the six-minute observation period are greater than 20 percent opacity, then continue the Method 9 observations for an additional 12 minutes for a total of 18 minutes.
  - b. If four or more individual 15-second readings during the 18-minute observation period are greater than 20 percent opacity, then continue the Method 9 observations for an additional 42 minutes for a total of 60 minutes.
- 50.2 **Smoke/No Smoke Plan.** During each calendar day that a source operates, observe the exhaust for the presence or absence of visible emissions, excluding condensed water vapor. Record the following information in a written log for each observation and submit copies of the records upon the request of the Department:
  - a. The date and time of the observation;
  - b. From Table 1 of this permit, the ID of the source observed;
  - c. Whether visible emissions are present or absent in the exhaust;
  - d. If the source starts operation on the day of the observation, the startup time of the source; and
  - e. Name, title, and signature of the person making the observation.
- **51.** The Permittee may reduce the number of 60 minute observations required by Condition 50.1 to one observation for every 4,380 hours of source operation, provided
  - 51.1 60 minutes of observations were not necessary under Condition 50.1b; or
  - 51.2 the source was observed for 60 minutes and no more than 8 individual 15-second readings were greater than 20 percent opacity.

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**52.** If a source is observed for 60 minutes and more than eight, but fewer than thirteen 15-second readings are greater than 20 percent opacity during the most recent observation, then the observation frequency under Condition 50.1 must be increased to or maintained at once every 1000 hours of source operation.

- 53. The Permittee may reduce the number of visible emission observations required by Condition 50.2 to one observation for every 30 days of source operation if the source operates without visible emissions in the exhaust during the most recent 30 days of operation.
- **54.** The Permittee shall install, calibrate, maintain and operate a COMS, for Source IDs 1 through 6, as set out in Condition 5.1.

### Corrective Actions Based on Visible Emissions Observations

- **55.** If visible emissions are present in the exhaust during an observation performed under Condition 50.2, the Permittee shall:
  - 55.1 Take actions to reduce visible emissions from the source within 24 hours of the observation;
  - 55.2 Keep a written record of the starting date, the completion date, and a description of the actions taken to reduce visible emissions;
  - 55.3 After completing the actions taken to reduce visible emissions, observe the visible emissions in accordance with Condition 50.2 at a frequency of at least once per day for the next 30 calendar days that the source operates, and continue according to the optional schedule set out in Condition 53; and
  - 55.4 If visible emissions are present in the exhaust or if subsequent visible emissions are observed under the schedule set out in Condition 55.3, then observe the exhaust in accordance with Condition 50.1 until written approval has been received from the Department to resume observations under Condition 50.2.

### Particulate Matter Testing

- **56.** The Permittee shall conduct tests to determine the concentration of particulate matter in the exhaust of Source IDs 1 through 12, 14 through 19, and 25 as follows:
  - 56.1 Conduct tests according to the requirements set out in Section 11 of this permit;
  - 56.2 Conduct a test no later than 90 days after any time a 60 minute visible emission observation performed under this Section or COMS records collected under Condition 5.1b results in:
    - a. 13 or more 15-seconds readings with an opacity greater than 20%;

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- b. 19 or more 10-secocond COMS data of greater than 20% opacity; or
- c. A 6 minute average opacity that is greater than 12% for a source with an exhaust stack diameter that is less than 21 inches.

56.3 During each test, observe visible emissions in accordance with Section 15 and calculate the average opacity that was measured during the test. Submit the results of the visible emission observations and the calculation with the source test report.

### Reporting Requirements

- **57.** The Permittee is not required to comply with Conditions 30, 31 and 32 when observing visible emissions under this section.
- **58.** Within 60 days of retrofitting Source IDs 1 through 6, or installing Source IDs 7 through 12, 14 through 19 and 25, the Permittee shall measure the exhaust stack diameter of each unit and submit information to the Department.
- **59.** The Permittee shall keep a record of the operating hours for each Source IDs 14 though 19, and 25, and submit these records with the report required by Condition 41.
- **60.** For all 60-minute visible emissions observations that occurred during an applicable reporting period, the Permittee shall submit copies of observation results with the report required by Condition 41.
- **61.** The Permittee shall submit an Excess Emission Report in accordance with Condition 39 if:
  - 61.1 A 60-minute visible emission observation results in:
    - a. 13 or more 15-seconds readings with an opacity greater than 20%;
    - b. 19 or more 10-second readings with an opacity greater than 20%;
    - c. A six-minute average opacity that is greater than 12% for a source with an exhaust stack diameter that is less than 21 inches; or
    - d. The results of a test for particulate matter exceed the particulate matter emission limit.
- **62.** Within 60 days of installation, the Permittee shall submit manufacturer data for Source IDs 14 through 19 showing compliance with the grain loading standard set out in Condition 6.2.

[18 AAC 50.320(a)(2)(A-E), 1/18/97]

### Section 15. Visible Emission Evaluation Procedures

An observer qualified according to 40 CFR 60, RM 9 shall use the following procedures to determine the reduction of visibility through the exhaust effluent.

**Position.** The qualified observer shall stand at a distance sufficient to provide a clear view of the emissions with the sun oriented in the 140° sector to his back. Consistent with maintaining the above requirement, the observer shall, as much as possible, make his observations from a position such that his line of vision is approximately perpendicular to the plume direction and, when observing opacity of emissions from rectangular outlets (e.g., roof monitors, open baghouses, noncircular stacks), approximately perpendicular to the longer axis of the outlet. The observer's line of sight should not include more than one plume at a time when multiple stacks are involved, and in any case the observer should make his observations with his line of sight perpendicular to the longer axis of such a set of multiple stacks (e.g., stub stacks on baghouses). The observer shall maintain a distance of at least 15 feet from the emission point.

**Field Records.** The observer shall record the name of the plant, emission location, facility type, observer's name and affiliation, and the date on the Visible Emissions Field Data Sheet The time, estimated distance to the emission location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), and plume background are recorded on the sheet at the time opacity readings are initiated and completed.

**Observations.** Opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. The observer shall not look continuously at the plume but instead shall observe the plume momentarily at 15-second intervals. Unless directed to do otherwise in this permit, observe emissions for 60 consecutive minutes to obtain a minimum of 240 observations.

**Attached Steam Plumes.** When condensed water vapor is present within the plume as it emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible. The observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made.

**Detached Steam Plume.** When water vapor in the plume condenses and becomes visible at a distinct distance from the emission outlet, the opacity of emissions should be evaluated at the emission outlet prior to the condensation of water vapor and the formation of the steam plume.

**Recording Observations.** Opacity observations shall be recorded to the nearest 5 percent at 15-second intervals on the Visible Emissions Observation Record contained in this section. Record the minimum number of observations required by the permit. Each momentary observation recorded shall be deemed to represent the average opacity of emissions for a 15-second period.

**Data Reduction.** To determine compliance with a standard set out in Conditions 5.2 of this permit, count the number of observations that exceed 20 percent opacity and record this number on the sheet.

To determine the six-minute average opacity set out in Condition 56.2c of this permit, divide the observations recorded on the record sheet into sets of 24 consecutive observations. Sets need not be consecutive in time and in no case shall two sets overlap. For each set of 24 observations, calculate the average by summing the opacity of the 24 observations and dividing this sum by 24. If an applicable standard specifies an averaging time requiring more than 24 observations, calculate the average for all observations made during the specified time period. Record the average opacity on the sheet.

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### Visible Emissions Field Data Sheet

Certified Observer:		<u> </u>	
Company:		Inter C	SOURCE LAYOUT SKETCH
Location:		In	X Emission Point
Test No.:	Date:		
Source:			
Production Rate, Operating Rate & Unit Operating Hours:			
Hrs. of observation:			Qiaervers. Poskiun
			Sun Location Line

Clock Time	Initial		Final
Observer location Distance to discharge			
Direction from discharge			
Height of observer point			
Background description			
Weather conditions Wind Direction			
Wind speed			
Ambient Temperature			
Relative humidity			
Sky conditions: (clear, overcast, % clouds, etc.)			
Plume description: Color			
Distance visible			
Water droplet plume? (attached or detached?)			
Other information			

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/isible l	Emissio	ons Obse	ervatio	n Reco	ord				Page (	of
Company			Ce	rtified O	bserver	•	<del>-</del>		<del>*</del> -	<i>"</i>
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### Section 16. Material Balance Calculation

If the sulfur content of a liquid fuel shipment is greater than 0.3% by weight, calculate the three-hour exhaust concentration of  $SO_2$  using the following equations:

The  $wt\%S_{fuel}$ ,  $wt\%C_{fuel}$ , and  $wt\%H_{fuel}$  are equal to the weight percents of sulfur, carbon, and hydrogen in the fuel. These percentages should total 100%.

The fuel weight percent (wt%) of sulfur is obtained pursuant to Condition 7.3. The fuel weight percents of carbon and hydrogen are obtained from the fuel refiner.

The volume percent of oxygen in the exhaust (vol%<sub>dry</sub>O<sub>2, exhaust</sub>) is obtained from oxygen meters, manufacturer's data, or from the most recent ORSAT analysis at the same engine load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if  $\mathbf{wt\%S_{fuel}} = 1.0\%$ , then enter 1.0 into the equations not 0.01 and if  $\mathbf{vol\%_{dry}O_{2,\,exhaust}} = 3.00\%$ , then enter 3.00, not 0.03.

[18 AAC 50.350(g), 1/18/97]

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If the sulfur content of a coal shipment is greater than 0.26% by weight, calculate the three-hour exhaust concentration of SO<sub>2</sub> using the following equations:

The  $wt\%S_{fuel}$ ,  $wt\%C_{fuel}$ , and  $wt\%H_{fuel}$  are equal to the weight percents of sulfur, carbon, and hydrogen in the coal. These percentages should total 100%.

The coal weight percents, dry basis, of sulfur, carbon, hydrogen, nitrogen, and oxygen are determined by conducting an ultimate analysis of a representative sample using the procedures established in ASTM D3176-89.

The volume percent of oxygen in the exhaust (vol%<sub>dry</sub>O<sub>2, exhaust</sub>) is obtained from oxygen meters, manufacturer's data, or from the most recent ORSAT analysis at the same boiler load used in the calculation.

Enter all of the data in percentages without dividing the percentages by 100. For example, if  $\mathbf{wt\%S_{fuel}} = 1.0\%$ , then enter 1.0 into the equations not 0.01 and if  $\mathbf{vol\%_{dry}O_{2,\,exhaust}} = 3.00\%$ , then enter 3.00, not 0.03.

[18 AAC 50.350(g), 1/18/97]

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## Section 17. ADEC Notification Form

	Fax this fo	orm to: (907) 26	69-7508	Telephone	: (907) 269-8	8888				
	rmy Alaska									
-	any Name									
	<u>Wainwright</u> y Name									
1.	Reason for noti	fication:								
	□ Excess Emis	ssion	☐ Peri	mit Condit	ion Exceed	ence				
2.	Event Informati									
		START Time: (hr:min):		END Time:		Duration				
	Date:			:		;;				
	Date:	::		:		<u>:</u> :				
					Total:	<u></u> :				
3.	Cause of Event									
	☐ START UP ☐ SHUT DOWN	☐ UPSET C☐ SCHEDU	CONDITION LED MAINTE	ENANCE		OL EQUIPMENT				
	Attach a detailed de exceeded.	scription of what	happened, ii	ncluding the	parameters or	operating conditions				
١.	Sources Involve	∍d:								
	Identify each Emission Source involved in the event, using the same identification number and name as in the Permit. List any Control Device or Monitoring System affected by the event. Attach additional sheets as necessary.									
	Source ID No. Sou	rce Name	Descript	ion		Control Device				
						_				
5.	<b>Emission Limit</b>	and/or Permi	it Conditio	n Exceed	ed:					
	Identify each Emission Standard and Permit Condition exceeded during the event. Attach a list of ALL known or suspected injuries or health impacts. Attach additional sheets as necessary.									
	Permit Condition			Limit		Exceedence				
5.	Emission Redu	ction:				_				
,.		Attach a detailed description of ALL of the measures taken to minimize and/or control emissions								
	during the event.	SCRIPTION OF ALL	or the measu	res taken to	minimize and/d	or control emissions				
•	Corrective Action	ons:								
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	d on information and be nation in and attached				•	ements and				
Printod	Name:		Signature:			Date:				

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# Section 18. Permit Documentation

April 30, 1993	Air Quality Control Permit to Operate No. 9331-AA003.
September 20, 1996	Air Pollution Emission Statement No. 43-EL-5680-96.
June 27, 2000	Letter from Jim Baumgartner (ADEC) to Brian Taylor (US Army) regarding Bassett Hospital Site Preparation Work.
July 21, 2000	US Army submitted historical data for the IRP Sites (on two CD-ROMs).
August 15, 2000	Letter from Jim Baumgartner (ADEC) to Debra Breindel (US Army) regarding Projected VOC Emissions for 2000 at Fort Wainwright IRP Sites.
September 11, 2000	US Army Response to Letter regarding Projected VOC Emissions for 2000 at Fort Wainwright IRP Sites.
September 29, 2000	Manuals for the Oxidizer units used at Fort Wainwright.
October 2, 2000	US Army submitted construction permit application, New Source Review/Prevention of Significant Deterioration Evaluation For Modification to the US Army's Ft. Wainwright, Alaska Facility.
October 11, 2000	The CHPP Emission Reduction and Upgrade Project's bid documents (on two CD-ROMs).
October 22, 2000	ADEC letter to US Army finding application complete and requesting additional information.
November 15, 2000	US Army response to ADEC Completeness Review Comments.